ALS diagnostic in the electrodiagnostic department of an orthopedic hospital during 2014-2015: Clinical and electrophysiological characteristics

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Amyotrophic lateral sclerosis (ALS) is an uncommon illness, it is caused by motor neuron degeneration; upper, lower and bulbar muscles are affected. The diagnostic is based on El Escorial criteria. In some cases it needs to be differentiating from orthopedic illness. ALS diagnosis in electrodiagnostic lab of “Frank Pais” orthopedic hospital has been 2-3 patients per year in the last 5 years. During January 2014-January 2015, nine patients were evaluated, four of them had ALS diagnosis and the other five were diagnosed like orthopedic illness. Sensory and by segments motor nerve conduction studies, electromyography, somatosensory evoked potentials (SSEP) and magnetic resonance image (MRI) were done to them. The age of patients was from 30-60 years old. Eight of them were male and one was female. Illness started in upper extremities in 55.5% of patients; it was in concordance with percent of muscle atrophy at physical exam. Clinical fasciculation were present in all patients, in 22.2% bulbar muscle were affected. Hyperreflexia was present in 44.4% and plantar reflex was abnormal in 100%. Nerve conduction was abnormal in 77.7%, SSEP were abnormal in 44.4% and EMG abnormalities were observed in 100% of patients. MRI was abnormal in 66.6%, it showed not specific abnormalities. In conclusions: ALS patients increased in electrodiagnostic lab of orthopedic “Frank Pais” Hospital in relation to previous five years. Almost patients had initial orthopedic illness diagnosis. Electrophysiological and image studies confirmed ALS diagnosis in 100% of cases.

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